

SECTION 16143  
WIRING DEVICES

PART 1 - GENERAL

1.1 SUMMARY

- A. The extent of wiring device work is indicated by drawings. Wiring devices are defined as single discrete units of electrical distribution systems, which are intended to carry but not utilize electric energy.
- B. Types of electrical wiring devices in this section include the following:
  - 1. Receptacles.
  - 2. Switches.
  - 3. Wallplates.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide wiring devices of one (1) of the following (for each type and rating of wiring device):
  - 1. Arrow Hart
  - 2. Bryant Electric Co.
  - 3. Cooper Wiring Devices
  - 4. General Electric Co.
  - 5. Hubbell Inc.
  - 6. Leviton Mfg Co.
  - 7. Pass and Seymour Inc.

2.2 FABRICATED WIRING DEVICES

- A. General: Provide factory-fabricated wiring devices, in types, colors and electrical ratings for applications indicated and which comply with NEMA Standards Pub/No. WD 1. Provide gray color devices except as otherwise indicated; color selection to be verified by Contractor with Architect/Engineer. All devices shall be specification grade.
- B. Receptacles:
  - 1. Heavy-Duty Duplex: Provide heavy-duty self-grounding type duplex receptacles, 2-pole, 3-wire, triple-wipe contacts, 20-amperes, 125-volts, with green hexagonal equipment ground screw, metal plaster ears, designed for side and back wiring with spring loaded, screw activated pressure plate, with NEMA configuration 5-20R unless otherwise indicated.
    - a. P & S Plug Tail receptacles with connector built into back of device and separate polycarbonate connector housing with connector leads are acceptable.

C. Switches:

1. General: Switches shall be provided as specified in this section. Additional features such as key operator, rocker and lighted toggle shall be provided where indicated on the drawings.
2. Single-Pole: Provide heavy-duty flush single-pole AC quiet, self-grounding type switches, 20-amperes, 120/277-volts, with mounting yoke insulated from mechanism, equip with plaster ears, toggle switch handle, and side-wired screw terminals.

2.3 WIRING DEVICE ACCESSORIES

- A. Wallplates: Provide wallplates for single and combination wiring devices, of types, sizes and with ganging and cutouts as indicated. Select plates which mate and match wiring devices to which attached. Construct with metal screws for securing plates to devices; screw heads colored to match finish of plates; wallplates colored to match wiring devices except as noted below. Provide plates possessing the following additional construction features:

1. Finished Areas:

Material and Finish:	0.04-inch thick, type 302 satin finished stainless steel
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2. Unfinished Areas, such as Mechanical Rooms; or at ceilings of finished areas with exposed structure:

Material and Finish:	Steel plate, galvanized.
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3. Surface-mounted boxes in unfinished areas or at ceilings of finished areas with exposed structure shall be furnished with 4-inch square raised covers, with openings to fit device or devices to be installed.

PART 3 - EXECUTION

3.1 INSTALLATION OF WIRING DEVICES

- A. Install wiring devices as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation" and in accordance with recognized industry practices to fulfill project requirements.
- B. Coordinate with other work, including painting, electrical boxes and wiring work, as necessary to interface installation of wiring devices with other work.
- C. Install wiring devices only in electrical boxes, which are clean; free from excess building materials, dirt and debris.
- D. Install wallplates after painting work is completed.
- E. The continuity of branch circuit conductors shall not depend on device connections such as lampholders, receptacles, etc. where the removal of the device would interrupt the continuity. Branch circuit conductors shall be spliced with jumpers to connect the device.
- F. Connections of wire to devices shall be screw tightened (except devices with built-in connector/leads). Connections using only spring pressure are not acceptable.

- G. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for wiring devices. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Standards 486A and B. Use properly scaled torque indicating hand tool.

- H. All switches and receptacles with exposed terminals shall be wrapped with insulating tape equal to Scotch No. 33 such that no live parts are left exposed.

### 3.2 PROTECTION OF WALLPLATES AND RECEPTACLES

- A. Upon installation of wallplates and receptacles, advise Contractor regarding proper and cautious use of convenience outlets. At time of Substantial Completion, replace those items, which have been damaged, including those burned and scored by faulty plugs and those, which are not clean and free from paint, dirt and debris.

### 3.3 GROUNDING

- A. Provide equipment grounding connections for wiring devices, unless otherwise indicated. Tighten connections to comply with tightening torques specified in UL Standard 486A to assure permanent and effective grounds.

### 3.4 TESTING

- A. Prior to energizing circuitry, test wiring for electrical continuity, and for short-circuits. Ensure proper polarity of connections is maintained. Subsequent to energization, test wiring devices to demonstrate compliance with requirements.

END OF SECTION